The Future of Archaeology: Using Modern Technology to Uncover the Past

Of all three sites in the Madaba Plains Project, perhaps nowhere do modern technology and ancient history meet so successfully as at Tell Jalul. Randy Younker, the site’s director, and his team of archaeologists have been using the most up-to-date equipment to reconstruct a more complete picture of the past. As the dig at Jalul enters its second phase, the Madaba Plains Project team has just published a book, Madaba Plains Project: 40 Years, detailing the first phase of excavations at all three sites.

When Siegfried Horn first visited Jalul, he thought it might be the site of biblical Heshbon, a city of the Amorite king Sihon and perhaps the location of the “pools of Heshbon” mentioned in Song of Solomon. Horn had begun excavating Tell Hisban in hopes of finding evidence of the biblical Heshbon, but after a few seasons didn’t discover the necessary evidence of a Late Bronze Age occupation from around 2000 BC.

Initial investigations and pottery analysis from Jalul revealed that the site contained sherds from the Late Bronze Age, from exactly the time Sihon would have occupied the city. By the time the digging permit came through in 1992, the archaeologists’ research objectives had broadened: they were interested in investigating not only the biblical history of the site, but also the history of the entire region. “Jalul is the biggest site in the region—it’s even bigger than Hisban—and so we knew it had to be some sort of important site,” says Younker.

But perhaps the most interesting find at Jalul is a series of interconnected pools that Younker and his colleagues believe may be the “pools of Heshbon” likened to the Beloved’s eyes in Song of Solomon. Within the walls of the city, the archaeologists found a massive reservoir possibly fed by artesian springs. Running from the reservoir to the outside of the city is a half-meter-wide channel, which Younker thinks was “probably done in the 7th century, after the reservoir was dug.” The channel drains into a series of four ancient ponds at progressively lower elevations. The Madaba Plain, as well as the city of Jalul, sits on top of a large aquifer, and at times there was even more water than the city could use or the reservoir could hold—so they built this water channel. We think the water ran out of the city reservoir into the first pool, which is very large and today is being used as a soccer field.

The team is now testing to determine if the pools existed in the 6th century BC, when Song of Solomon was written. “If that’s the case,” says Younker, “could these be the pools of Heshbon the Bible talks about?” Jalul continued to be an important site throughout the Middle Ages, when Muslim traders would stop and water their livestock at the pools or visit the site on pilgrimages.

Younker and his team are documenting their findings with innovative technology, and bringing the digital age to the Bronze Age (1550–1200 BC). “We know from the pottery and some inscriptions that the site was probably an Ammonite site by the 7th century,” says Younker. “We’re also finding a bit of Moabite pottery from the 8th century, which could come either from trade or residence in our site.”

If we find even a coin, we can get its exact longitude and latitude down to a resolution of about one centimeter. (This is already much better than if we were using a paper plan, which lets the team create 3D topographical models and pieced together by drawing and sometimes guessing. According to Younker, “we can make scans of each potsherd and theoretically reconstruct the whole pot, as well as make two-dimensional publishable plates,” with the scanner.

But then he kept listening. The issue was highly emotional for the respondents, many of whom had grown up during the Soviet era. “Being Seventh-day Adventist in the Soviet Union generally meant you were from a minority group,” Patterson says. “Studies of history will recall the widespread marginalization of minority groups in favor of a unified Soviet state. Their cultures were attacked by both the Soviet Union and the Orthodox Church to a degree where there was a strong attempt to obliterate their culture. The pain they experienced made it difficult for them to agree with the abstract statement, ‘My theology determines my cultural practice,’” says Patterson.

Case studies like these have been the basis for the second phase of a global study conducted by Erich Baumgartner, professor of leadership and international communication, and Stan Patterson, associate professor of church ministry. Baumgartner and Patterson are interested in understanding how denominational leaders around the world view the responsibilities of leadership—the Incan culture, then the Spaniards, and the Roman Catholic Church—than in the leadership the Incan culture, then the Spaniards, and the Roman Catholic Church—than in

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Where Culture and Theology Intersect

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northern European or North American coun-
tries. The way a leader is expected to lead in
the large and in the local, often ticks down in
to church leadership.

“Philosophically, we would say that lead-
ership should be primarily determined by our
theology,” says Patterson, “I’m committed to the
idea that the Bible should be our primary stan-
dard in everything. But the reality is that cul-
ture is a factor in the way leadership is man-
disted in different regions across the world.

Baumgartner and Patterson then took the
results of their first study to a second one, now in its second phase. “Essentially, we’re asking
how that enormous impact of culture affects
our present leadership development needs,”
says Baumgartner. The first phase of the
study was a statistical analysis of pastor member-
ship ratios throughout the General Conference
to determine the current leadership situation
of the church. The second phase involved field
research in those areas determined to have the
highest need of leaders. Next, Baumgartner
and Patterson plan to administer a survey
to leaders around the world correlating the
leadership needs found in the first phase of
their study with the extant roles of pastors and
administrators as well as church growth patterns. While the first phase of the study was de-
scriptive, both Patterson and Baumgartner see
its results having an immediate affect on how
Adventists train their leaders.

Right now, Baumgartner says, many higher-
level leaders across the globe are training in
the United States, many of them at Andrews
University, or trained by teachers who have
been trained in the United States. However,
the American concept of a leader is often very
different from, say, the Peruvian concept of a
leader. “The question becomes, how do we
develop leaders so that they use their authority
in appropriate ways for the culture yet also
reflect principles of biblical leadership?”

Leadership is a social construction, says
Baumgartner. “That means that what it means
to be leader is a degree already deter-
mined by the society in which a person lives.
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With over 20 million Adventists distributed all across the livable continents, that’s a lot of
different leadership styles. “We want to be
aware of the whole spectrum of leadership styles,” says Baumgartner, “so we can then

look towards our leaders who are responsible for
leadership development.” Then, the church
would begin training both local and foreign col-
leagues who can incorporate principles of biblical leadership into their own cultures.

However, the Bible also advocates a specifi-
cally counter-cultural approach to church
leadership. The example most commonly
cited is found in Matthew 20:25–26, the

rulers of the Gentiles lord it over them . . . no
so with you. When should church leadership
incorporate cultural influences, and when
should it stand in opposition to cultural
leadership styles? It’s a fine line to walk.

“There is nothing wrong with some cultures
being more oriented towards a hierarchical
leadership,” says Baumgartner. Mandating
leadership styles in such a scenario could lead
to confusion,” he says. “On the other hand,
you have certain principles in Scripture;
that which God directs us with the power to
choose, and no one should dominate over another. If there’s a gap
between leadership in culture and leadership in
the church, should the church say something
about that and be counter-cultural to those
types of things? I think so.”

Their study may help determine appropri-
ate areas for cultural influence in church
leadership, and lead to improved training for
church leaders. “How the principles of
 servant leadership are expressed [world-
wide] is exactly the object of our study,” says
Baumgartner. “We want to steer away from
imposing a predominantly Western view on
our church leaders. Cultural leadership can be
acted in other ways, and can it be legitimate?
I have a bunch of Jesus would say yes.”

While the study cannot as yet make recom-
mendations to the world church, it has the potential
to usher in a new era of diverse and cross-
cultural leadership practices.

Diane McBride
Sciences and Mathematics

Diane McBride, professor of sociology
and chair of the Department of
Behavioral Sciences, has taught in the
College of Arts & Sciences since 1988.

She has also been the director of the
Institute for Prevention of addic-
tion, the Institute for Latino studies, the
Czech Republic Union, as well as a principal
a pastor in the Czech Republic, Hebrew and Latin

Bauernsaw, or advisor of the Year. His work was previously

Steve Hansen
Arts and Humanities

Steve Hansen, professor of art, has taught in
the School of Architecture, Art & Design since 1987. He
has worked in the mediums of painting, sculpture, and
now primarily clay.

His artworks have appeared in nationally
recognized scholarly journals including Ceramics
Monthly, American Craft Magazine, and Fiche Mag-
azine, as well as popular interest magazines such as
American Style Magazine and American Com-
porary Art. His works appear in academic textbooks
such as Estroded Ceramics and The Topo book. Steve has exhibited in galleries from St. Joseph,
Chicago, Detroit, New York, Boston, Providence,
Charlotte, Seattle, Los Angeles and Australia.

His work appears in several museums across
the country and he has participated in over 60 in-
dividual and group exhibitions. He has won a
number of “Best Ceramics” awards at national juried
exhibitions. His exhibitions include the internationally
recognized Grand Rapids ArtPrize, and more
significantly his multi-year participation in the
world’s foremost fair of contemporary decorative
arts and design called SOFA, the Sculpture Objects
and Functional Art Fair; held each year in New York,
Santa Fe and Chicago. He has exhibited in over 100 juried
galleries from around the world.

Hansen has also served as the keynote speaker
at the 2011 Lakeland Conference for the Fine Arts,
and presented papers at regional and international
ceramics conferences. Googling “Steve Hansen
teapots” will turn up more than 3.5 million results.
His work has been previously featured in the
2011 issue of this magazine.

2012 Recipients, L-R: Diane McBride, Curt Vanderwaal, Jiri Moskala, Steve Hansen

Jiri Moskala
Religion and Theology

Jiri Moskala, professor of Old Testament exegesis
and theology, has taught in the Seventh-day Adven-
tist Theological Seminary since 1999.

Before coming to Andrews, Moskala worked as a
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